

Work Order ID 61458

Wednesday, August 25, 2010 2:31:54 PM

BLUE



Page 1

Item ID: D206-642-441

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 8/27/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 9/24/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: MF

Date: 10-8-25 Tooling:

Date:

Run Start



QC:

Date: SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation/
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D2650 Rev F

100



DC

Document Control

DOCUMENT CONTROL

0.00

Memo

0.00

Photocopy bluefile and create labels per PPP D206-642-441 CHG002

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

110

Operation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Skidtubes

0.00

Skidtubes

Memo

0.00

1-Deburr Fwd edge of tube

2-Remove ridge on inside of Fwd edge of tubeas per Dwg D2650

3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required.

A/R Aluminum Rod *m114877/m112507*

4-Grind weld flush to cap on top surface only.

5-Cut aft end 138.60" from front of tube

6-Drill pilot holes using drill jig DT8025 & DT8169 (A,B,C,D). Open to Ø 0.312".

7-Drill holes for wearplates using DT 8028-7. Open to Ø 0.297".

8-Open using #6 Drill Bit

9-Open holes for Tow Ring to Ø 0.625" as per Dwg D2650, D2650-7 Drilling Detail

10-Remove inner indexing ridge on aft end of skidtubeas per Dwg D2650

11-Deburr and Blow out all chips form inside the tube

BE 10/08/27

W/O:		WORK ORDER CHANGES					
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Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

115



QC

Quality Control

Operation
Description

QC5- Inspect part completeness to step on W/O

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

S1080827

116



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

S1080827

40

120



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

DP

10-8-30

W/O:		WORK ORDER CHANGES					
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Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



QC3- Inspect Part Finish

0.00

x1

-

BE 08/30

QC

Quality Control

Memo

0.00

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

140

Operation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Skidtubes

Skidtubes

0.00

Skidtubes

Mems

0.00

1-Open holes to finished size as per Dwg D2650, D2650-7 Drilling Detail
(without cutting fluid)

2-Countersink crossbolt spacer holes as per Dwg D2650(without cutting fluid)

3-Deburr. Blow out chips. Grind alodine off around crossbolt spacer.

4-Bond D2654-7 web in place as per QSI 015Ensure holes line upAllow 12 Hrs.
cure time before cuttingStart Date: 10/6/30Time: 11:00Finish Date: 10/8/31Time: 8:10 AMA/R Sikaflex-291 m116114 Sikaflex expiry date: 01/2011

W/O:		WORK ORDER CHANGES					
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Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInspec.
Stamp

150



QC5- Inspect part completeness to step on W/O

0.00

8/10/08/31

QC

Quality Control

0.00

160



Skidtubes

0.00

Skidtubes

Memo

0.00

1-Prep per QSI 005 and Insert cross bolt spacers D2649. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

A/R Aluminum Rod m112507

2-Grind welds flush as per Dwg D2650.

3-Counterbore 5/16" x 0.750" deep as per Dwg D2650 Deburr

8E 10/09/07
3 8E 10/09/08

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

170



Skidtubes

Operation
Description

HandFinishing

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Skidtubes

Skidtubes

Memo

Install D2680-041 Nut Plate as per Dwg D2650

3 8/24/08/08

180



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

S 10/08/08

0.00

190



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

S 10/08/08

(10)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200



HandFinish

Pressure Wash per QSI005 4.3

0.00

=) NL 10/09/14

1



Hand Finishing

Memo

0.00

Brush alodine tube on crossbolt spacer area, do not acid etch, do not dip tube in tank.

205



SprayPaint

Memo

0.00

NL 10 09 23 ①

Spray Painting

Spray paint Delfleet Blue
Primer B 114404
Delfleet Blue B 113171
Clear Delfleet B 115506

206



QC

QC14- Inspect Spray Paint

0.00

Memo

0.00

NL 10-09-24 ①

Quality Control

W/O:		WORK ORDER CHANGES					
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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

230



HandFinish

Hand Finishing

Operation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

0.00

24 10/09/28

y) c/

Memo

0.00

1-Install inserts & wearpads as per dwg D2922. Use a drop of Sikaflex inside insert holes before installing wearpad/wearplate.

A/R Sikaflex-291 10/10/09
Sikaflex expiry date: 10/10

2-Install O-Rings D2651-3 on plugs D2651-1 with Petroleum Jelly and install plugs as per Dwg D2650. Clean excess adhesive

3-Install MS27039-4-06 Screw as per DEO 9153

4-Inspect for foreign object per QSI 024

5-Install D2646 Aft Cap and seal with SikaflexClean excess adhesive

A/R Sikaflex-291 10/10/09
Sikaflex expiry date: 10/10

6-Wing Walk as per Dwg D2650-7 and QSI 005 4.4

Batch: 1115028

W/O:		WORK ORDER CHANGES					
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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240



QC5- Inspect part completeness to step on W/O

0.00

E 16/09/28

(f)

QC

Quality Control

250



Packaging

0.00

C 16/09/28 C

Packaging

Packaging

Memo

0.00

Identify and pack for shipping as per PPP D206-642-441

Location: PPP 61628

PPP Rev:

260



QC21- Final Inspection - Work Order Release

0.00

10/09/28 JJ

QC

Quality Control

Memo

0.00

10-928
D

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Picklist Print

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Page 1

Work Order ID: 61458



Parent Item: D206-642-441



Parent Item Name: Replacement Skidtube

Start Date: 8/27/2010

Required Date: 9/24/2010

Comments: IPP Rev:H 05.10.11 □ Added D3429-1 per CHG002 □ KJ/CP/JLM
IPP Rev:I 08-05-01 add QC3 DD verified by:EC
IPP Rev:J 08-09-29 revF as per dwg DD verified by:

Start Qty: 1.00

Required Qty: 1.00

W/O:		WORK ORDER CHANGES					
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Parent Item: D206-642-441

Parent Item Name: Replacement Skidtube



Start Date: 8/27/2010

Required Date: 9/24/2010

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-3

Purchased

No

170

Each

472.0000

2

2



Cherry Rivet

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
	ST311	472	
	112314	4	
	113539	44	
	113973	424	

D2649

Manufactured

No

170

Each

29.0000

23

23



Cross Bolt Spacer

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
	LG	29	
	58545	2	
	60652	27	

D2680-041

Manufactured

No

170

Each

35.0000

1

1



Nut Plate

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
	ST021	35	
	55366	35	

1

86 10/09/08

W/O:		WORK ORDER CHANGES					
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Start Date: 8/27/2010

Required Date: 9/24/2010

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

230

Each

3,222.000

60

60



M 10/09/28

Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
PKG11	3030	
114723	3030	
ST282	153	X60
110511	10	
114407	143	
ST381	39	
114654	39	

AN960JD10L NAS1149D0332J Purchased

No

230

Each

2,501.000

62

62



M 10/09/28

Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST348	2501	M 10/09/28
110985	2501	

PTO =)

AN960JD416 NAS1149D0463J Purchased

No

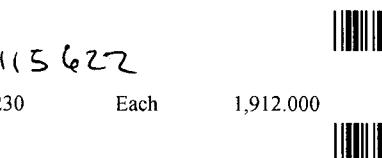
230

Each

0.0000

1

1



M 10/09/28

Washer

NAS1149D0463J

Purchased

No

230

Each

1,912.000

2

2



CR3212-4-03

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST311	1912	
111359	5	
112314	2	
114436	448	
114450	83	
114859	1374	

2 BE 10/09/08

W/O:		WORK ORDER CHANGES					
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Start Date: 8/27/2010

Required Date: 9/24/2010

Start Qty: 1.00

Required Qty: 1.00

D2651-1



Manufactured No

230

Each

734.0000

22

22

UL 10109128

Plug

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
	FP	152	
	51530	152	
	fpa	582	
	53349	411	X22
	57869	171	

D2651-3



Manufactured No

230

Each

342.0000

22

22

UL 10109128

O-Ring

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
	FP	342	
	46114	342	X22

D3535-15



Manufactured No

230

Each

20.0000

1

1

UL 10109128

Wearshoe

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
	FP18	20	
	59236	7	
	61241	13	X1

D3535-23



Manufactured No

230

Each

7.0000

1

1

UL 10109128

Wearshoe

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
	FP21	7	
	60864	7	B61830

X1

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Start Date: 8/27/2010

Required Date: 9/24/2010

Start Qty: 1.00

Required Qty: 1.00

D3535-37

Manufactured

No

230

Each

17.0000

1

1



1110109128

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	17	
51654	4	
56101	13	

D3536-15

Manufactured

No

230

Each

22.0000

1

1



1110109128

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FF	16	
56055	4	
60875	12	
FP11	6	
59238	6	

D3536-23

Manufactured

No

230

Each

10.0000

1

1



1110109125

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP011	10	
60234	10	

D3536-37

Manufactured

No

230

Each

15.0000

1

1



1110109128

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	15	
56102	15	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, August 25, 2010 2:31:54 PM

Page 6

Work Order ID: 61458



Parent Item: D206-642-441



Parent Item Name: Replacement Skidtube

Start Date: 8/27/2010

Required Date: 9/24/2010

Start Qty: 1.00

Required Qty: 1.00

D3537-1

Manufactured No

230

Each

32.0000

6

6



HL 10109128

Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP	1	
55465	1	
FP017	48	
FP17	31	
57713	3	
60192	3	
60491	25	

B61640

X6

D3537-3

Manufactured No

230

Each

10.0000

1

1



HL 10104178

Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP19	10	B60866
59711	10	

Y1

MS27039-1-08

Purchased No

230

Each

1,685.000

2

2



HL 10104128

Screw

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST291	1685	
110835	493	
114718	192	
115108	1000	

X2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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NOTE: Date & initial all entries

Picklist Print

Wednesday, August 25, 2010 2:31:54 PM

Page 7

Work Order ID: 61458



Parent Item: D206-642-441



Parent Item Name: Replacement Skidtube

Start Date: 8/27/2010

Required Date: 9/24/2010

Start Qty: 1.00

Required Qty: 1.00

MS27039-4-06



Purchased

No

230

Each

118.0000

1

1



41 10906128

Screw

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST292	118	
<u>109061</u>	24	<u>XL</u>
115460	94	

MS27039C1-08



Purchased

No

230

Each

802.0000

60

60



41 109128

SCREW

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	801	
<u>115336</u>	801	<u>Y60</u>
ST293	1	
19185	1	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

QTY -1	QTY -3	QTY -5	QTY -7	PART NUMBER	DESCRIPTION
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
1				D2654-3	WEB
		1		D2654-5	WEB
			1	D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
17	18	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN960JD10L	WASHER
2	2	2	2	CCR264SS3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN960JD416	WASHER
52	52			CR3212-4-04	RIVET

F

X 4/14/58

RELEASED
08.08.08

F

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 11) INSERT D2651-1 PLUG CW D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- 12) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- 13) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

F	DRAWING UPDATED TO CURRENT STANDARDS. SHT 6 ADDED. ALL SECTION AND DETAIL VIEWS TRANSFERRED TO SHT 6. SHT 1 IN PL PART D2649 QTY UPDATED. SHT 6 SECT C-C GRIND INSTRUCTIONS DELETED FROM NOTE 7 (SEE NCR 239).	AJS	08.08.08
E	RMOVE CBORE, CHG DRILL, ADD CHAMFER	CP	06.03.30
D	REDRAW; INCGRP. DE09136/9153/163 MOD GROUND HANDLING ON D2650-1/-3	CP	04.05.17
C	CHANGE HOLE PATTERN AND FRONT END	DS	97.10.29
B	AS MANUFACTURED CHANGES	DS	97.06.26
A	NEW ISSUE	DS	97.03.25
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		REV. F	
MFG. APPR.	D2650	SHEET 1 OF 6	
APPROVED		TITLE	SCALE
DE APPR.		206/407 SKIDTUBE ASSEMBLIES	NTS
DATE	08.08.08	COPYRIGHT © 1997 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY OTHER PURPOSE OR SHOWN TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC	

8 7 6 5 4 3 2 1

D

C

B

A

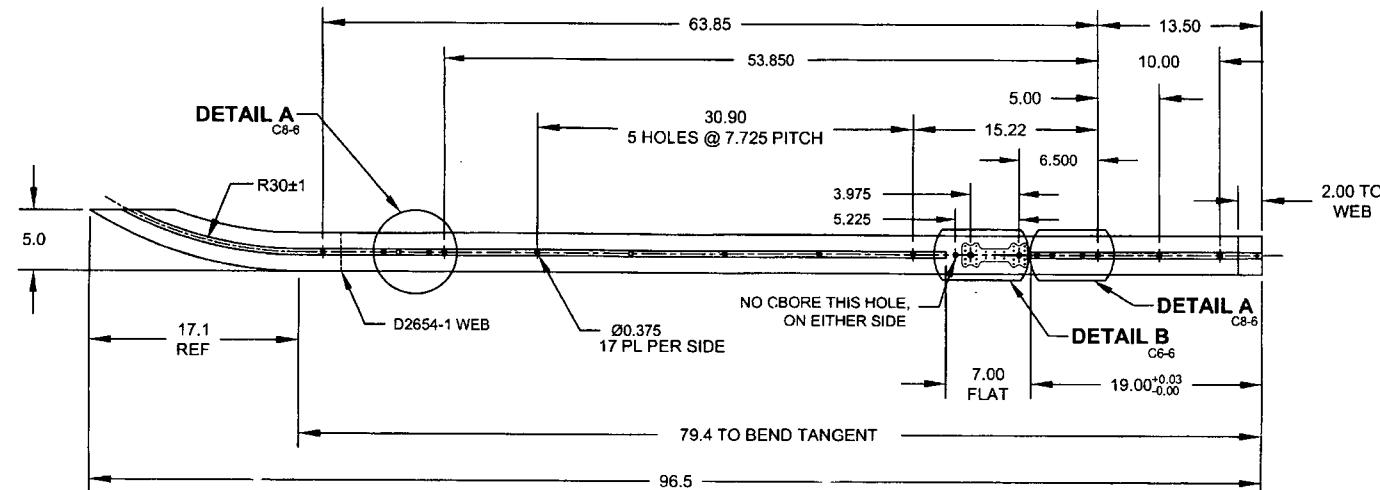
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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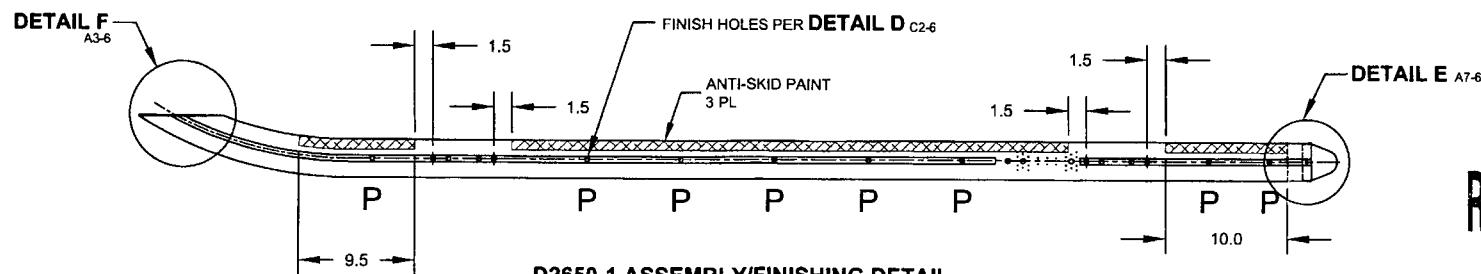
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2650-1 BENDING/DRILLING DETAIL

#6145-6



RELEASED
12-22-11

D2650-1 ASSEMBLY/FINISHING DETAIL

DESIGN	DS	DART AEROSPACE USA, INC		
DRAWN	AJS	PORT HADLOCK, WA		
CHECKED	<u>A</u>	DRAWING NO.	REV. F	
MFG. APPR.	<u>RE</u>	D2650	SHEET 2 OF 6	
APPROVED	<u>AP</u>	TITLE	SCALE	
DE APPR.	<u>AP</u>	206/407 SKIDTUBE ASSEMBLIES	NTS	
DATE	08.08.08			

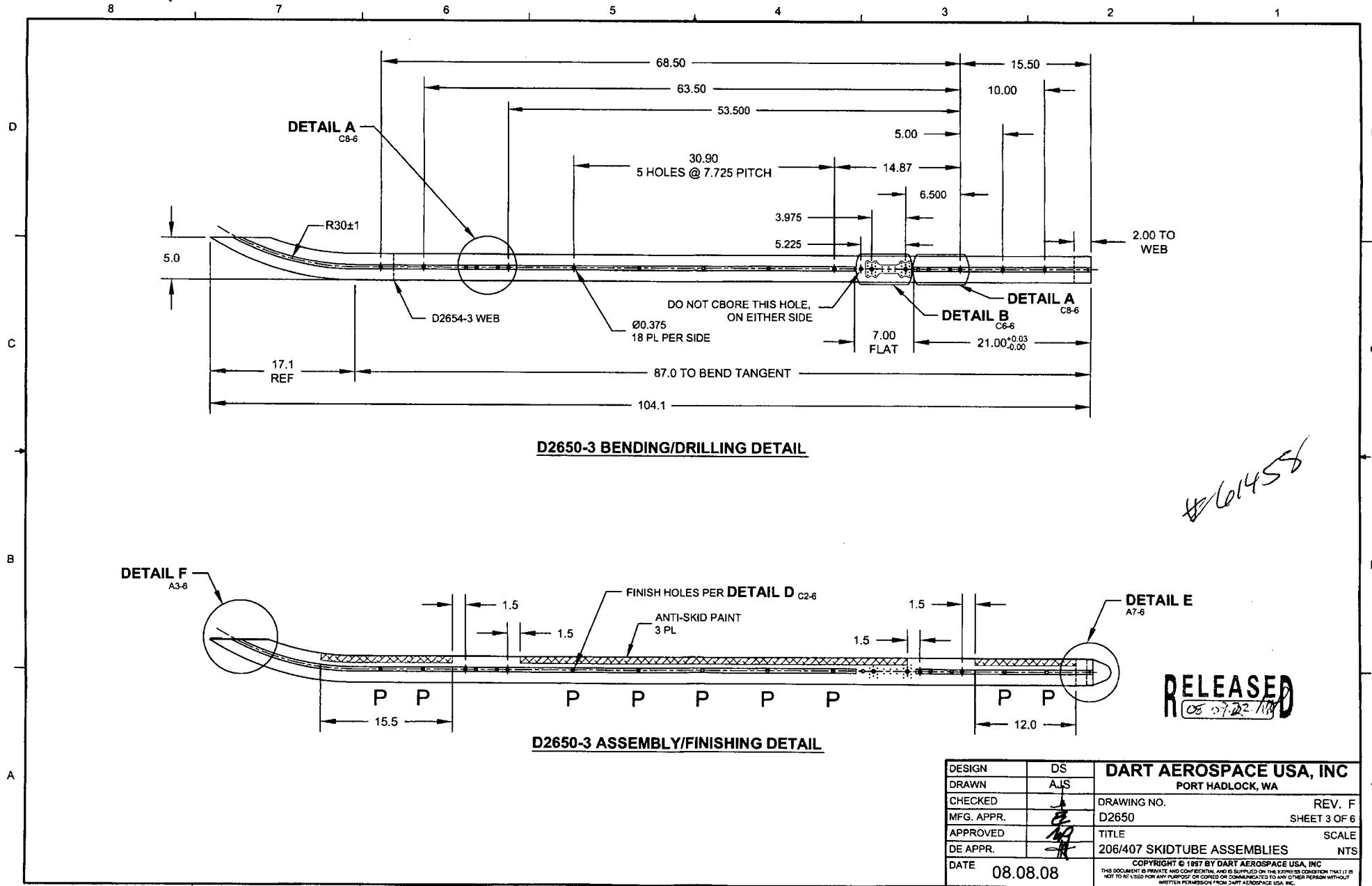
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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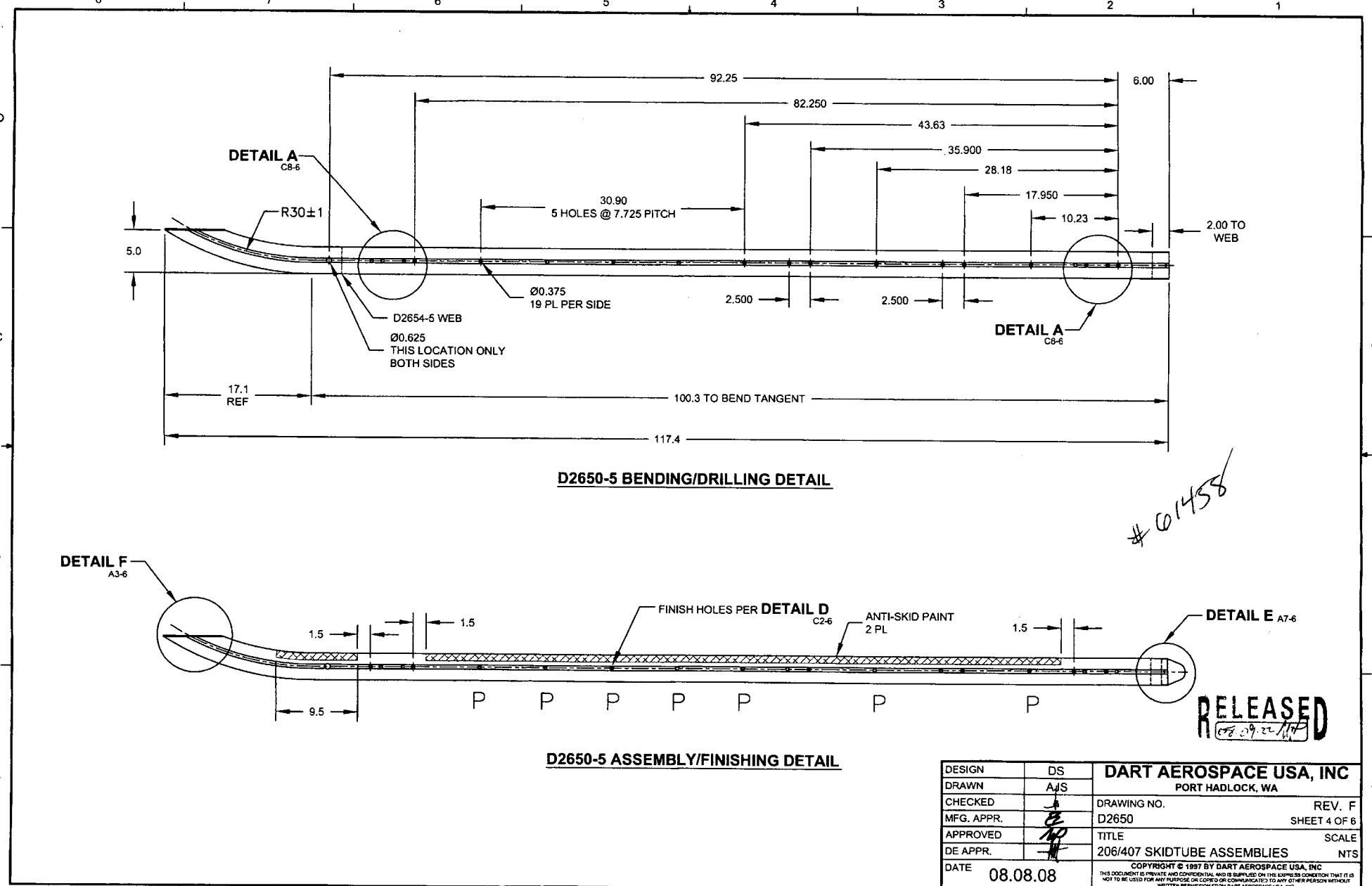
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Dart Aerospace Ltd

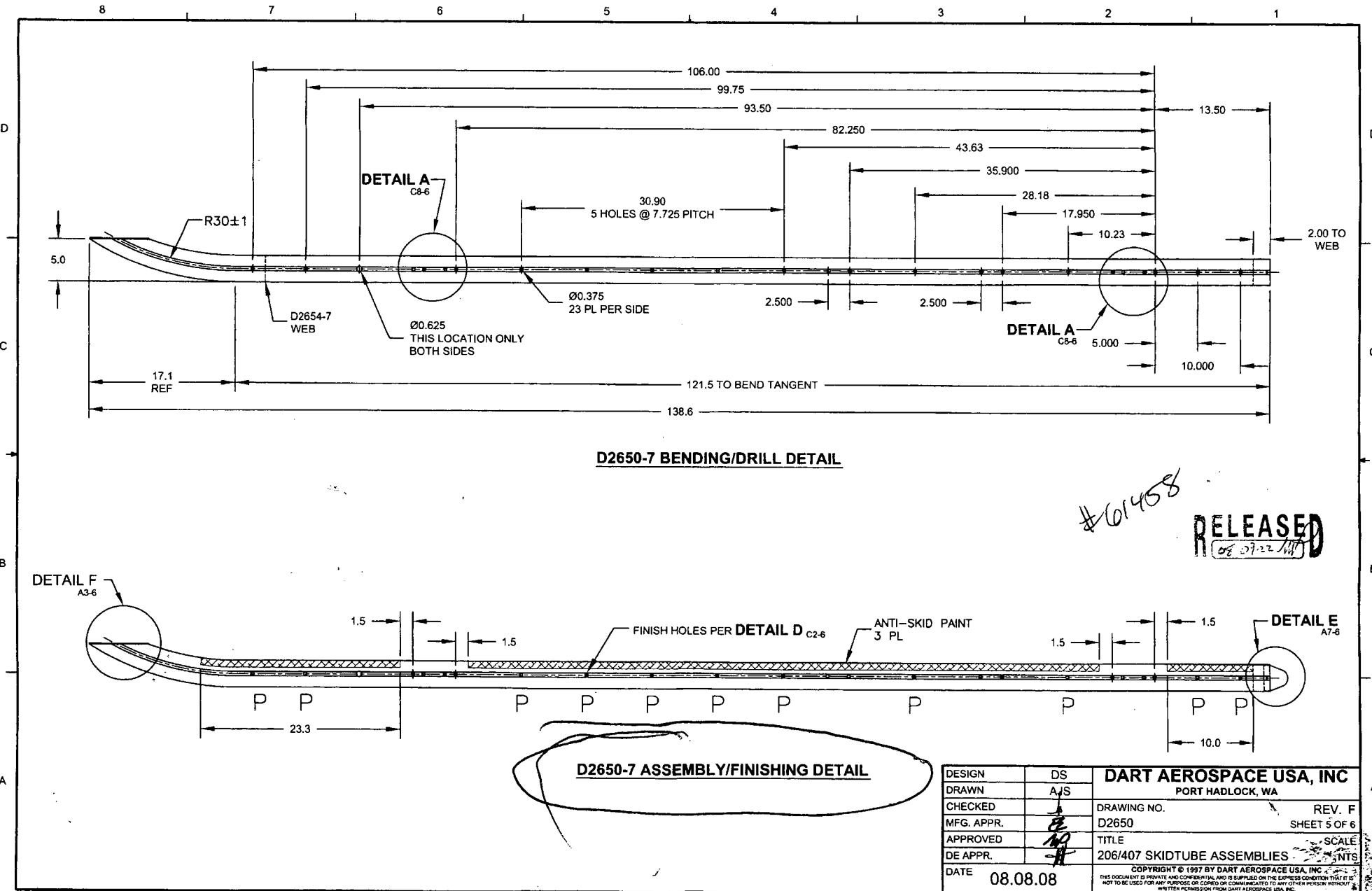
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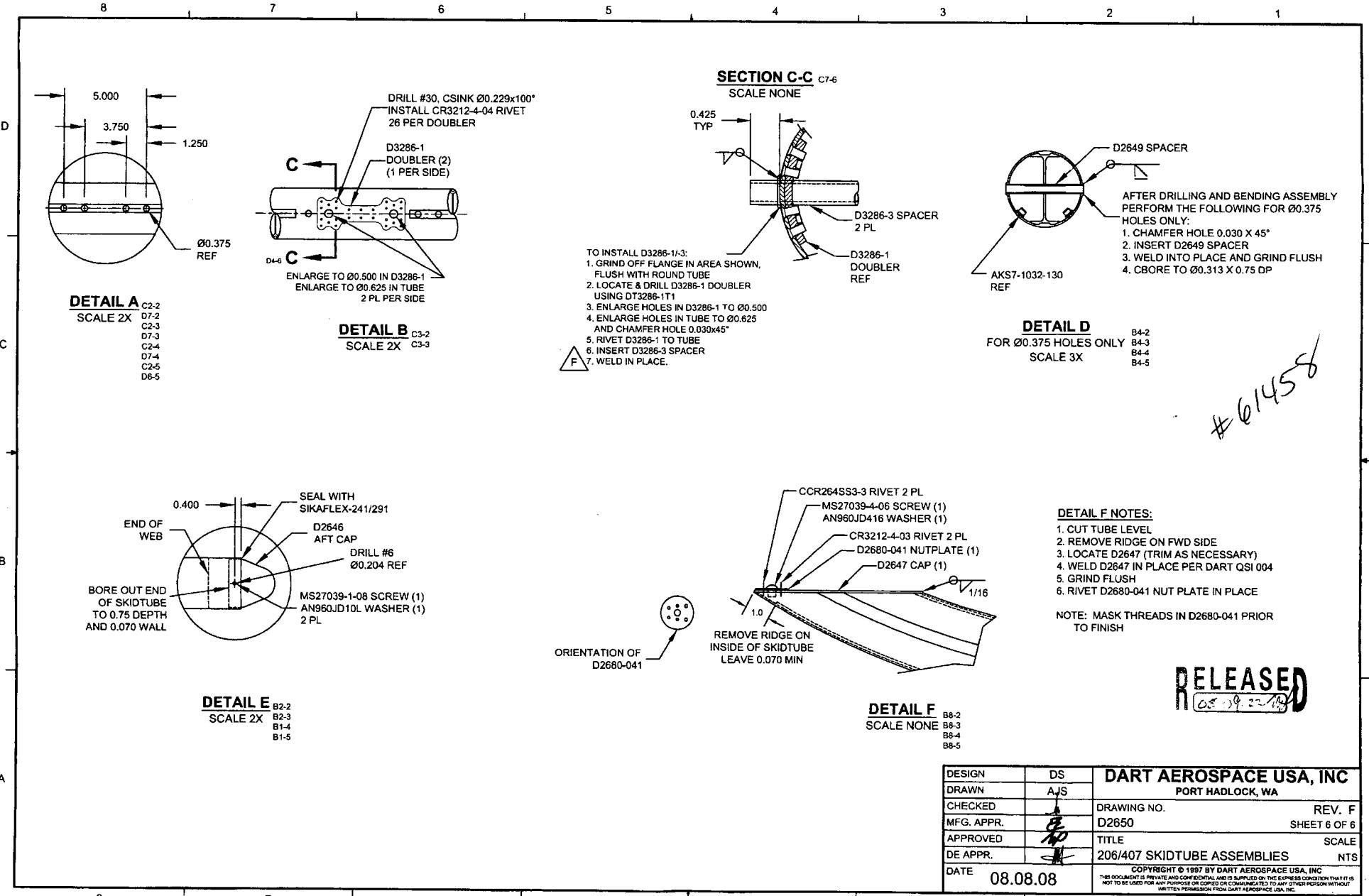
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NOTE: Date & Initial all entries

NO. 251

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 61039
Part number: D206-H12-441
Description: 206 skid tube
Welding Process: Tig[] Mig[]
Base material: Aluminium
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[] fail[]
Penetration: pass[] fail[]

UNACCEPTABLE

Cracks: pass[] fail[]
Undercut: pass[] fail[]
Pin holes: pass[] fail[]
Overlap (cold lap) pass[] fail[]
Porosity (surface): pass[] fail[]
Coloration: pass[] fail[]

Qualifier PC Barclay Elliott Date of Test Coupon 10.08.19
Welder Barclay Elliott Date of Test Coupon 10.08.19

The above named individual is qualified in accordance with AWS D17.1.2001 to weld